# TENT COOPERATION TRE Y

#### From the INTERNATIONAL BUREAU

#### **PCT**

#### **NOTIFICATION OF ELECTION**

(PCT Rule 61.2)

Commissioner **US Department of Commerce** United States Patent and Trademark Office, PCT 2011 South Clark Place Room CP2/5C24 Arlington, VA 22202

**ETATS-UNIS D'AMERIQUE** Date of mailing (day/month/year) 27 July 2001 (27.07.01)

in its capacity as elected Office International application No. Applicant's or agent's file reference PCT/GB00/03730 PG3798 International filing date (day/month/year) Priority date (day/month/year) 29 September 2000 (29.09.00) 01 October 1999 (01.10.99) **Applicant** 

	TITE, John
1.	The designated Office is hereby notified of its election made:  X in the demand filed with the International Preliminary Examining Authority on:  30 April 2001 (30.04.01)
2.	The election X was
	made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland

Authorized officer

Pascal Piriou

Telephone No.: (41-22) 338.83.38

Facsimile No.: (41-22) 740.14.35

## \*\*PATENT COOPERATION TF \TY

	From the INTERNATIONAL BUREAU			
PCT	То:			
NOTIFICATION OF THE RECORDING OF A CHANGE	REES, Marion, L GlaxoSmithKline			
	Corporate Intellectual Property			
(PCT Rule 92bis.1 and Administrative Instructions, Section 422)	Two New Horizons Court Brentford			
Administrative instructions, Section 422)	Middlesex TW8 9EP			
Date of mailing (day/month/year)	ROYAUME-UNI			
13 juillet 2001 (13.07.01)	L			
Applicant's or agent's file reference	IMPORTANT NOTICIOATION			
PG3798	IMPORTANT NOTIFICATION			
International application No.	International filing date (day/month/year)			
PCT/GB00/03730	29 septembre 2000 (29.09.00)			
The following indications appeared on record concerning:				
	X the agent the common representative			
Name and Address	State of Nationality State of Residence			
REES, Marion, L Glaxo Wellcome Pic	Telephone No.			
Glaxo Wellcome House Berkeley Avenue	020 8966 8000			
Greenford Middlesex UB6 0NN	Facsimile No.			
United Kingdom	020 8966 8838			
	Teleprinter No.			
2. The International Bureau hereby notifies the applicant that	the following change has been recorded concerning:			
the person the name X the ad				
Name and Address REES, Marion, L	State of Nationality State of Residence			
GlaxoSmithKline Corporate Intellectual Property	Telephone No.	*		
Two New Horizons Court Brentford	020 8966 8412			
Middlesex TW8 9EP	Facsimile No. 020 8966 8838			
United Kingdom	Teleprinter No.			
	recognition No.			
3. Further observations, if necessary:	•	<del></del>		
4. A copy of this notification has been sent to:				
X the receiving Office	X the designated Offices concerned	1		
the International Searching Authority	the elected Offices concerned			
the International Preliminary Examining Authority	other:			
The later region of D	Authorized officer			
The International Bureau of WIPO 34, chemin des Colombettes	R. Chrem			
1211 Geneva 20, Switzerland	T. I			
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38			

Form PCT/IB/306 (March 1994)

# PATENT COOPERATION TO ATY

	From the INTERNATIONAL BUREAU
PCT	To:
NOTIFICATION OF THE RECORDING	REES, Marion, L
OF A CHANGE	GlaxoSmithKline
	Corporate Intellectual Property
(PCT Rule 92bis.1 and	Two New Horizons Court
Administrative Instructions, Section 422)	Brentford
	Middlesex TW8 9EP
Date of mailing (day/month/year)	ROYAUME-UNI
13 juillet 2001 (13.07.01)	
Applicant's or agent's file reference	
PG3798	IMPORTANT NOTIFICATION
International application No.	International filing date (day/month/year)
PCT/GB00/03730	29 septembre 2000 (29.09.00)
1 01/02/00/00	25 Septembre 2000 (25.05.00)
1. The following indications appeared on record concerning:	
the applicant the inventor	X the agent the common representative
Name and Address	State of Nationality State of Residence
REES, Marion, L	State of Nestacines
Glaxo Wellcome Pic	Telephone No.
Glaxo Wellcome House	· ·
Berkeley Avenue Greenford	020 8966 8000
Middlesex UB6 0NN	Facsimile No.
United Kingdom	020 8966 8838
	Teleprinter No.
2. The International Bureau hereby notifies the applicant that	the following change has been recorded concerning:
the person the name X the ac	dress the nationality the residence
Name and Address	State of Nationality State of Residence
REES, Marion, L	
GlaxoSmithKline Corporate Intellectual Property	Telephone No.
wo New Horizons Court	020 8966 8412
Brentford Middlesex TW8 9EP	Facsimile No.
United Kingdom	020 8966 8838
	Teleprinter No.
3. Further observations, if necessary:	
4. A copy of this notification has been sent to:	
X the receiving Office	X the designated Offices concerned
the International Searching Authority	the elected Offices concerned
the International Preliminary Examining Authority	other:
The International Bureau of WIPO	Authorized officer
34, chemin des Colombettes	R. Chrem
1211 Geneva 20, Switzerland	
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

Form PCT/IB/306 (March 1994)

# PATENT COOPERATION T. ATY

	From the INTERNATIONAL BUREAU			
PCT	То:			
NOTIFICATION OF THE RECORDING OF A CHANGE  (PCT Rule 92bis.1 and Administrative Instructions, Section 422)  Date of mailing (day/month/year) 01 March 2002 (01.02.02)	REES, Marion, L GlaxoSmithKline Corporate Intellectual Property (CN9.25.1) 980 Great West Road Brentford Middlesex TW8 9GS ROYAUME-UNI			
01 March 2002 (01.03.02)				
Applicant's or agent's file reference PG3798	IMPORTANT NOTIFICATION			
International application No. PCT/GB00/03730	International filing date (day/month/year) 29 September 2000 (29.09.00)			
1. The following indications appeared on record concerning:				
	X the agent the common representative			
Name and Address REES, Marion, L	State of Nationality State of Residence			
GlaxoSmithKline Corporate Intellectual Property Two New Horizons Court	Telephone No. 020 8966 8412			
Brentford Middlesex TW8 9EP United Kingdom	Facsimile No. 020 8966 8838			
Officea Kingaoffi	Teleprinter No.			
2. The International Bureau hereby notifies the applicant that t the person the name X the add				
Name and Address	State of Nationality State of Residence			
REES, Marion, L GlaxoSmithKline Corporate Intellectual Property (CN9.25.1)	Telephone No. +44(0) 20 8047 5000			
980 Great West Road Brentford	Facsimile No.			
Middlesex TW8 9GS	+44(0) 20 8047 6894			
United Kingdom	Teleprinter No.			
3. Further observations, if necessary:				
4. A copy of this notification has been sent to:				
X the receiving Office	the designated Offices concerned			
the International Searching Authority	X the elected Offices concerned			
X the International Preliminary Examining Authority	other:			
The International Bureau of WIPO	Authorized officer			
34, chemin des Colombettes 1211 Geneva 20, Switzerland	Jaime LEITAO			
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38			

Form PCT/IB/306 (March 1994)

# (19) World Intellectual Property Organization International Bureau



# 

#### (43) International Publication Date 12 April 2001 (12.04.2001)

#### **PCT**

# (10) International Publication Number WO 01/25792 A1

(51) International Patent Classification?:

101

- (21) International Application Number: PCT/GB00/03730
- (22) International Filing Date:

29 September 2000 (29.09.2000)

(25) Filing Language:

English

G01N 33/68

(26) Publication Language:

English

(30) Priority Data: 9923309.0

1 October 1999 (01.10.1999) G

- (71) Applicant (for all designated States except US): GLAXO GROUP LIMITED [GB/GB]; Glaxo Wellcome House, Berkeley Avenue, Greenford, Middlesex UB6 0NN (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): TITE, John [GB/GB]; Glaxo Wellcome Plc, Gunnels Wood Road, Stevenage, Middlesex SG1 2NY (GB).
- (74) Agent: REES, Marion, L; Glaxo Wellcome Plc, Glaxo Wellcome House, Berkeley Avenue, Greenford, Middlesex UB6 0NN (GB).

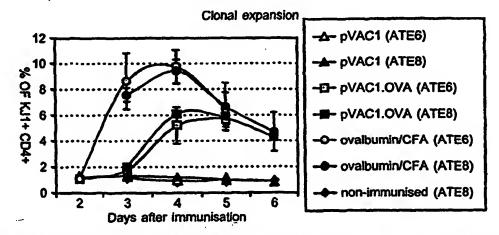
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- With international search report.
- Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

#### (54) Title: ASSAYING IN VIVO T-CELL RESPONSE UPON DNA VACCINATION



(57) Abstract: A method for assessing a T-cell response to nucleic acid administration comprises: (a) transferring into a mammal. T-cells expressing a T-cell receptor for an antigen (TCR-T-cells); (b) administering nucleic acid encoding said antigen to the mammal; (c) assessing an immune response associated with said TCR-T-cells.



A 2072/10



#### a. classification of subject matter IPC 7 G01N33/68 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system tollowed by classification symbols) IPC 7 GO1N Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) BIOSIS, EPO-Internal, PAJ, WPI Data, EMBASE, MEDLINE, CHEM ABS Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Category ° Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X MANICKAN ELANCHEZHIYAN ET AL: "Induction 1,2,4,8, of protective immunity against herpes simplex virus with DNA encoding the immediate early protein ICP 27." VIRAL IMMUNOLOGY, vol. 8, no. 2, 1995, pages 53-61, XP000981753 ISSN: 0882-8245 abstract X WO 99 19478 A (BARZAGA ELENE ;US HEALTH 1,3 (US); ZAREMBA SAM (US); SCHLOM JEFFREY (U) 22 April 1999 (1999-04-22) abstract page 18, line 14 - line 17 page 56 -page 57; claims 38,39 page 5, line 10 - line 15 Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "T" later document published after the international fiting date 'A' document defining the general state of the art which is not considered to be of particular relevance cited to understand the principle or theory underlying the invention 'E' earlier document but published on or after the international \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to filing date \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docucitation or other special reason (as specified) \*O\* document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 7 February 2001 26/02/2001 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Tuynman, A Fax: (+31-70) 340-3016



0.40		PC17GB 00/03730
ategory °	ation) DOCUMENTS CONSIDERED TO BE RELEVANT  Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SEARLE PETER F ET AL: "Immunotherapy II: Antigens, receptors and costimulation." CANCER AND METASTASIS REVIEWS, vol. 15, no. 3, 1996, pages 329-349,	1,2
A	XP000981545 ISSN: 0167-7659 abstract	11
A	PAPE KATHRYN A ET AL: "Use of adoptive transfer of T-cell-antigen-receptor-transgenic T cells for the study of T-cell activation in vivo."  IMMUNOLOGICAL REVIEWS, vol. 156, 1997, pages 67-78, XP000981639 ISSN: 0105-2896 cited in the application the whole document	1-8,10, 11
A	BRINKMANN VOLKER ET AL: "TCR-stimulated naive human CD4+ 45RO- T cells develop into effector cells that secrete IL-13, IL-5, and IFN-gamma, but no IL-4, and help efficient IgE production by B cells." JOURNAL OF IMMUNOLOGY, vol. 154, no. 7, 1995, pages 3078-3087, XP002159305 ISSN: 0022-1767 abstract page 3078, left-hand column, line 1 -right-hand column, line 1	1,4-8, 10,11
A	WO 98 08947 A (US HEALTH) 5 March 1998 (1998-03-05) abstract	1,12
Ρ,Χ	WO 00 12121 A (GLAXO GROUP LTD ;CHARO JEHAD (SE); KIESSLING ROLF (SE))  9 March 2000 (2000-03-09)  abstract  page 21 -page 22; example 1  page 26 -page 27; example 7  page 33, line 10 -page 34, line 3	1-5,7,8
Ρ,Χ	WO 99 65522 A (SIDNEY JOHN ; EPIMMUNE INC (US); SOUTHWOOD SCOTT (US); SETTE ALESSA) 23 December 1999 (1999-12-23) abstract page 20, line 8 - line 23 page 20, line 28 -page 21, line 6 page 30, line 31 - line 32 -/	1,2,9

		PCT7GB 00/	03/30
.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.
Р,Х	CREUSOT REMI ET AL: "CD4 T-cell responses after DNA vaccination by gene gun into mice following adoptive transfer of TCR-transgenic T cells." IMMUNOLOGY., vol. 98, no. suppl. 1, December 1999 (1999-12), page 129 XP002159306 Joint Congress of the British Society for Immunology and the British Society for Allergy & Clinical Immunology.;Harrogate, England, UK; November 30-December 03, 1999 ISSN: 0019-2805 the whole document		1-8,11

#### information on patent family members

onal Application No PCT/GB 00/03730

Patent document cited in search report		Publication date		atent family member(s)	Publication date
WO 9919478	A	22-04-1999	AU EP	9500498 A 1017810 A	03-05-1999 12-07-2000
WO 9808947	Α	05-03-1998	AU	5507098 A	19-03-1998
WO 0012121	A	09-03-2000	AU	5740299 A	21-03-2000
WO 9965522	Α	23–12–1999	AU	4577899 A	05-01-2000



# PATENT COOPERATION TOTATY

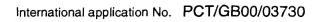




## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

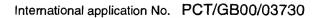
Applicant's	or age	ent's file reference			e Notification of Transmittal of International
PG3798/\	_		FOR FURTHER ACT		eliminary Examination Report (Form PCT/IPEA/416)
International	l appli	cation No.	International filing date (day	y/month/year	Priority date (day/month/year)
PCT/GB0	0/03	730	29/09/2000		01/10/1999
International G01N33/6		nt Classification (IPC) or na	I tional classification and IPC		
Applicant					
GLAXO G	RO	JP LIMITED et al.			
		ational preliminary exami smitted to the applicant a		epared by t	his International Preliminary Examining Authority
2. This R	EPO	RT consists of a total of	6 sheets, including this c	over sheet.	
be	en a	mended and are the bas		neets contai	scription, claims and/or drawings which have ining rectifications made before this Authority under the PCT).
These	anne	exes consist of a total of	sheets.		
3. This re	port	contains indications rela	ting to the following items:	:	
ı	×	Basis of the report			
,	×	Priority			
111	$\boxtimes$	•	pinion with regard to nove	ltv. inventiv	e step and industrial applicability
١٧		Lack of unity of inventio		,,	
V	×	Reasoned statement un			lty, inventive step or industrial applicability;
VI		Certain documents cite	-		
VII		Certain defects in the in	ternational application		ļ
VIII	×	Certain observations on	the international applicat	ion	
Date of subn	nissio	n of the demand	С	ate of comp	etion of this report
30/04/200	1		1	1.02.2002	
	exami	address of the international ning authority:	A	uthorized of	icer
European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d				ONCALV	ESMLFC (S)
		+49 89 2399 - 4465	1	olophono Na	10.90.2200.9127



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

. Basis	of the	report	
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1.	the and	Vith regard to the <b>elements</b> of the international application (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)): Description, pages:				
	1-14	4	as originally filed			
	Cla	ims, No.:				
	1-12	2	as originally filed			
	Dra	wings, sheets:				
	1/6-	-6/6	as originally filed			
<ol><li>With regard to the language, all the elements marked above were available or furnished to this Author language in which the international application was filed, unless otherwise indicated under this item.</li></ol>						
	The	se elements were	available or furnished to this Authority in the following language: , which is:			
		the language of a	translation furnished for the purposes of the international search (under Rule 23.1(b)).			
		the language of pu	ublication of the international application (under Rule 48.3(b)).			
		the language of a 55.2 and/or 55.3).	translation furnished for the purposes of international preliminary examination (under Rule			
3.			cleotide and/or amino acid sequence disclosed in the international application, the ry examination was carried out on the basis of the sequence listing:			
		contained in the in	nternational application in written form.			
		filed together with	the international application in computer readable form.			
		furnished subsequ	uently to this Authority in written form.			
	☐ furnished subsequently to this Authority in computer readable form.					
			it the subsequently furnished written sequence listing does not go beyond the disclosure in pplication as filed has been furnished.			
		The statement that listing has been full	It the information recorded in computer readable form is identical to the written sequence irnished.			
4.	The	amendments have	e resulted in the cancellation of:			
		the description,	pages:			
		the claims,	Nos.:			





		the drawings,	sheets:				
5.			established as if (some of) the amendments had not been made, since they have been rond the disclosure as filed (Rule 70.2(c)):				
		(Any replacement sh report.)	eet containing such amendments must be referred to under item 1 and annexed to this				
6.	Add	litional observations, i	f necessary:				
H.	Pric	ority					
1.		This report has been prescribed time limit	established as if no priority had been claimed due to the failure to furnish within the the requested:				
		☐ copy of the earli	er application whose priority has been claimed.				
		☐ translation of the	earlier application whose priority has been claimed.				
2.	×	This report has been been found invalid.	established as if no priority had been claimed due to the fact that the priority claim has				
		Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.					
3.	Add	litional observations, i	necessary:				
111_	Nor	n-establishment of o	pinion with regard to novelty, inventive step and industrial applicability				
	The	questions whether th	e claimed invention appears to be novel, to involve an inventive step (to be non- ally applicable have not been examined in respect of:				
		the entire international	•				
	×	claims Nos. 1-12.					
be	caus	ee:					
	⊠		application, or the said claims Nos. 1-12 with respect to IA relate to the following does not require an international preliminary examination (specify):				
			s or drawings (indicate particular elements below) or said claims Nos. are so unclear binion could be formed (specify):				
		the claims, or said cla	aims Nos. are so inadequately supported by the description that no meaningful opinion				

International application No. PCT/GB00/03730

nucleotide dministrative
l applicability;
,

2. Citations and explanations see separate sheet

#### VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made: see separate sheet

#### **EXAMINATION REPORT - SEPARATE SHEET**

#### Section II

1. The document WO 00/12121 (D1), from the same applicant, filed on 25.08.1999 and claiming a priority from 26.08.1998, discloses a method of DNA vaccination. Example 1 of WO 00/12121, describes on page 22 the transferring into normal syngeneic mice lymphoid cells from TCR-transgenic mice, expressing a receptor specific for an ovalbumin antigen. These mice were then immunised subcutaneously (by means of gene gun) with plasmid DNA or with plasmid DNA encoding ovalbumin. Three days later, regional lymph node cells were removed and their proliferative response to ovalbumin peptide was measured. Cytokine assays were also done (see example 7 and page 33, lines 10-16).

Thus, the priority of the present application is not validly claimed because it was not the first filing of the claimed subject-matter.

#### Section III

1. Claims 1-12 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Article 34(4)(a)(i) PCT).

#### Section V

- 1. Reference is made to the following document:
  - D2: IMMUNOLOGY., vol. 98, no. suppl. 1, December 1999 (1999-12), page 129 ( Joint Congress of the British Society for Immunology and the British Society for Allergy & Clinical Immunology.; Harrogate, England, UK; November 30-December 03).
- 2. The document D2 is the scientific counterpart of the present PCT application. D2 was published before the filing date of 29.09.2000 and because the priority of the

**EXAMINATION REPORT - SEPARATE SHEET** 

present application is not valid (see section III above) its contents are prior art for the subject- matter claimed in the present application. D2 describes the CD4 Tcell responses after DNA vaccination by gene gun into mice following adoptive transfer of TCR-transgenic T cells (see abstract). Thus, the subject-matter of present claims 1-12 is not novel (Article 33 (2) PCT).

3. For the assessment of the present claims 1-12 on the question whether they are industrially applicable, no unified criteria exist in the PCT. The patentability can also be dependent upon the formulation of the claims. The EPO, for example, does not recognise as industrially applicable the subject-matter of claims to the methods of medical treatment practised on the human or animal body.

#### Section VIII

1. The attention of the applicant is called to the fact that most, if not all, national or regional jurisdictions would not accept a claim to a method of diagnosis performed on the human body.



(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference		of Transmittal of International Search Report (20) as well as, where applicable, Item 5 below.
PG3798	ACTION	220) as well as, where applicable, fleff 5 below.
International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)
PCT/GB 00/03730	29/09/2000	01/10/1999
Applicant	<u></u>	
GLAXO GROUP LIMITED		
This International Search Report has been according to Article 18. A copy is being tra	n prepared by this International Searching Autransmitted to the International Bureau.	nority and is transmitted to the applicant
This international Search Report consists  X  It is also accompanied by	of a total of4 sheets. a copy of each prior art document cited in this	report.
1. Basis of the report		
	international search was carried out on the bas ess otherwise indicated under thIs item.	sis of the international application in the
the international search was Authority (Rule 23.1(b)).	as carried out on the basis of a translation of the	ne international application furnished to this
was carried out on the basis of the	e sequence listing:	ternational application, the international search
ļ <del> </del>	nal application in written form.	
=	mational application in computer readable form this Authority in written form.	
	this Authority in computer readble form.	
	sequently furnished written sequence listing do silled has been furnished.	oes not go beyond the disclosure in the
		Identical to the written sequence listing has been
2. Certain claims were four	nd unsearchable (See Box I).	
3. Unity of invention is lack	ting (see Box II).	
4. With regard to the title,		
the text is approved as suit	omitted by the applicant.	
X the text has been establish	ned by this Authority to read as follows:	
ASSAYING IN VIVO T-CEL	L RESPONSE UPON DNA VACCINA	FION
	•	
5. With regard to the abstract,		
	omitted by the applicant. ned, according to Rule 38.2(b), by this Authority date of mailing of this international search rep	
6. The figure of the drawings to be public	shed with the abstract is Figure No.	1
as suggested by the applic		None of the figures.
because the applicant faile		
Decause this figure better	characterizes the Invention.	

International Application No

	PCT/GB 00/03730		
A. CLASSI IPC 7	FICATION OF SUBJECT MATTER G01N33/68		
	o International Patent Classification (IPC) or to both national classification	cation and IPC	
Minimum do IPC 7	ocumentation searched (classification system followed by classification ${\tt G01N}$	tion symbols)	
Documentat	tion searched other than minimum documentation to the extent that	such documents are included. In the fields s	earched
<b>!</b>	ata base consulted during the international search (name of data base), EPO-Internal, PAJ, WPI Data, EMBA		
C. DOCUME	ENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the re	elevant passages	Relevant to claim No.
X	MANICKAN ELANCHEZHIYAN ET AL: "of protective immunity against he simplex virus with DNA encoding immediate early protein ICP 27." VIRAL IMMUNOLOGY, vol. 8, no. 2, 1995, pages 53-61 XP000981753 ISSN: 0882-8245 abstract	erpes the	1,2,4,8, 9
X	WO 99 19478 A (BARZAGA ELENE ;US (US); ZAREMBA SAM (US); SCHLOM JI 22 April 1999 (1999-04-22) abstract page 18, line 14 - line 17 page 56 -page 57; claims 38,39 page 5, line 10 - line 15		1,3
X Furth	er documents are listed in the continuation of box C.	χ Patent family members are listed	in annex.
<ul> <li>"A" document defining the general state of the art which is not considered to be of particular relevance</li> <li>"E" earlier document but published on or after the International filing date</li> <li>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</li> <li>"O" document referring to an oral disclosure, use, exhibition or other means</li> <li>"P" document published prior to the international filing date but later than the priority date claimed</li> </ul>		<ul> <li>*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention.</li> <li>*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone.</li> <li>*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</li> <li>*&amp;* document member of the same patent family</li> </ul>	
	February 2001	Date of mailing of the international sea 26/02/2001	rch report
Name and m	alling address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2  NL - 2280 HV Rijswijk  Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Tuynman, A	

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C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT  Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
oalegory *	Orange of Cocument, with inchestivit, where appropriate, of the research passages	
X	SEARLE PETER F ET AL: "Immunotherapy II: Antigens, receptors and costimulation." CANCER AND METASTASIS REVIEWS, vol. 15, no. 3, 1996, pages 329-349, XP000981545 ISSN: 0167-7659 abstract	1,2
Α	adstract	11
Α	PAPE KATHRYN A ET AL: "Use of adoptive transfer of T-cell-antigen-receptor-transgenic T cells for the study of T-cell activation in vivo."  IMMUNOLOGICAL REVIEWS, vol. 156, 1997, pages 67-78, XP000981639 ISSN: 0105-2896 cited in the application the whole document	1-8,10,
<b>A</b>	BRINKMANN VOLKER ET AL: "TCR-stimulated naive human CD4+ 45RO- T cells develop into effector cells that secrete IL-13, IL-5, and IFN-gamma, but no IL-4, and help efficient IgE production by B cells." JOURNAL OF IMMUNOLOGY, vol. 154, no. 7, 1995, pages 3078-3087, XP002159305 ISSN: 0022-1767 abstract page 3078, left-hand column, line 1 -right-hand column, line 1	1,4-8, 10,11
A	√WO 98 08947 A (US HEALTH) 5 March 1998 (1998-03-05) abstract	1,12
Ρ, Χ	WO 00 12121 A (GLAXO GROUP LTD ; CHARO JEHAD (SE); KIESSLING ROLF (SE))  9 March 2000 (2000-03-09)  abstract  page 21 -page 22; example 1  page 26 -page 27; example 7  page 33, line 10 -page 34, line 3	1-5,7,8
Ρ,Χ	WO 99 65522 A (SIDNEY JOHN ;EPIMMUNE INC (US); SOUTHWOOD SCOTT (US); SETTE ALESSA) 23 December 1999 (1999-12-23) abstract page 20, line 8 - line 23 page 20, line 28 -page 21, line 6 page 30, line 31 - line 32 -/	1,2,9
	-/	

International Application No PCT/GB 00/03730

		PC1/GB 00/03/30	
Category *	ation) DOCUMENTS CONSIDERED TO BE RELEVANT  Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
P,X	CREUSOT REMI ET AL: "CD4 T-cell responses after DNA vaccination by gene gun into mice following adoptive transfer of TCR-transgenic T cells." IMMUNOLOGY., vol. 98, no. suppl. 1, December 1999 (1999-12), page 129 XP002159306 Joint Congress of the British Society for Immunology and the British Society for Allergy & Clinical Immunology.;Harrogate, England, UK; November 30-December 03, 1999 ISSN: 0019-2805 the whole document	1-8,11	

information on patent family members

international Application No PCT/GB 00/03730

Patent document cited in search report	•	Publication date		Patent family member(s)	Publication date
WO 9919478	Α	22-04-1999	AU EP	9500498 A 1017810 A	03-05-1999 12-07-2000
WO 9808947	Α	05-03-1998	AU	5507098 A	19-03-1998
WO 0012121	Α	09-03-2000	AU	5740299 A	21-03-2000
WO 9965522	Α	23-12-1999	AU	4577899 A	05-01-2000